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U.S. Patent and Trademark Office  
Electronic Filing System (EFS) Data  
Electronic Patent Application Submission  
USPTO Use Only

EFS ID: 19984  
Application ID: 10065772  
Title of Invention: APPARATUS AND METHODS FOR  
OPTIMIZING REACTOR CORE  
COOLANT FLOW DISTRIBUTIONS  
First Named Inventor: Hwang Choe  
Domestic/Foreign Application: Domestic Application  
Filing Date: null  
Effective Receipt Date: 2002-11-18   
Submission Type: Utility Patent Filing  
Filing Type: new-utility  
Confirmation Number: 0  
Attorney Docket Number: 24-NS-6042  
Digital Certificate Holder: cn=Michael Tersillo, ou=Registered Attorneys, ou=Patent and  
Trademark Office, ou=Department of Commerce, o=U.S.  
Government, c=US  
Certificate Message Digest: k8/PH7x4DVRF3TKXXQ19dA==  
Total Fees Authorized: \$990.0

Payment Category: DA - Deposit Account  
Deposit Account Number: 12384  
Deposit Account Name: Michael Tersillo



# TRANSMITTAL FORM

Electronic Version 1.0.3

Stylesheet Version: 1.0

Attorney Docket  
Number:

24-NS-  
6042

Submission Type: Utility Patent  
Filing

## APPARATUS AND METHODS FOR OPTIMIZING REACTOR CORE COOLANT FLOW DISTRIBUTIONS

First Named Inventor: Hwang Choe

**SUBMITTED BY**

Name: Michael Tersillo

Registration Number: 42180

Electronic Signature Mark: Michael  
Tersillo Date Signed: 20021118

*I certify that the use of this system is for OFFICIAL correspondence between patent applicants or their representatives and the USPTO. Fraudulent or other use besides the filing of official correspondence by authorized parties is strictly prohibited, and subject to a fine and/or imprisonment under applicable law.*

*I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.*

**Attached Files:**

declaration  
declaration

Dec1.tif  
Dec2.tif

declaration  
declaration  
bibd-transmittal  
patent-assignments  
us-information-disclosure-statement  
fee-transmittal  
specification

Dec3.tif  
Dec4.tif  
12551-211apds.xml  
12551-211asgn.xml  
12551-211ids.xml  
12551-211fee.xml  
Document3.xml

**Attached Image File(s):**

Dec1.tif  
Dec2.tif  
Dec3.tif  
Dec4.tif

**Comments:**

DECLARATION AND POWER OF ATTORNEY	Attorney's Docket No. 24-NS-6042
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As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **APPARATUS AND METHODS FOR OPTIMIZING REACTOR CORE COOLANT FLOW DISTRIBUTIONS**, the specification of which:

(check one)  is attached hereto  
 was filed on \_\_\_\_\_ as Application Serial No \_\_\_\_\_  
 and was amended on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations §1.56(a).

I hereby claim priority benefits under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112. I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status (patented, pending, abandoned)
_____	_____	_____
_____	_____	_____

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below:

Application Serial No.	Filing Date	Additional provisional application numbers are listed on a supplemental priority sheet attached hereto.
_____	_____	_____
_____	_____	_____

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

Ronald E. Myrick, Reg. No. 26,315; Henry J. Policinski, Reg. No. 26,621; and James W. Mitchell, Reg. No. 25602, all of General Electric Company, 3135 Easton Turnpike, Fairfield, CT 06431; James E. McGinness, Reg. No. 33,260, GE Nuclear Energy, PO Box 780, 3901 Castle Hayne Road, M/CA11, Wilmington, NC 28401; John S. Beulick, Reg. No. 33,338; Patrick W. Rasche, Reg. No. 37,916; Michael Tersillo, Reg. No. 42,180; Bruce T. Atkins, Reg. No. 43,476; Robert B. Reeser, III, Reg. No. 45,548; Thomas M. Fisher, Reg. No. 47,564 and Daniel M. Fitzgerald, Reg. No. 38,880, all of Armstrong Teasdale, One Metropolitan Square, Suite 2600, St. Louis, MO 63102-2740

Send Correspondence to:	Direct Telephone Calls To:
John S. Beulick Armstrong Teasdale LLP One Metropolitan Square, Suite 2600 St. Louis, MO 63102-2740	John S. Beulick 314/621-5070

DECLARATION AND POWER OF ATTORNEY	Attorney's Docket No. 24-NS-6042
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application and any patent issued thereon.

**SOLE OR FIRST INVENTOR:**

Full Name: Hwang Choe  
Signature: Hwang Choe Date: 11/6/2002  
Residence: Saratoga, CA 95070  
Citizenship: U.S.A.  
Post Office Address: 20580 Sevilla Lane, Saratoga, CA 95070

**SECOND JOINT INVENTOR:**

Full Name: Jose L. Casillas  
Signature: Jose L. Casillas Date: 11/6/2002  
Residence: Cupertino, CA 95014  
Citizenship: U.S.A.  
Post Office Address: 1381 Poppy Way, Cupertino, CA 95014

**THIRD JOINT INVENTOR:**

Full Name: Sig Wolf  
Signature: Sig Wolf Date: 11/6/2002  
Residence: Sunnyvale, CA 94087  
Citizenship: U.S.A.  
Post Office Address: 806 Nisqually Drive, Sunnyvale, CA 94087

**FOURTH JOINT INVENTOR:**

Full Name: Mark Joseph Colby  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: Wilmington, NC 28405  
Citizenship: U.S.A.  
Post Office Address: 8333 Vintage Club Circle, Wilmington, NC 28405

<b>DECLARATION AND POWER OF ATTORNEY</b>	Attorney's Docket No. <b>24-NS-6042</b>
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As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

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Direct Telephone Calls To:

John S. Beulick  
314/621-5070

Attorney's Docket No.

24-NS-6042

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application and any patent issued thereon.

## SOLE OR FIRST INVENTOR:

Full Name: Hwang Choe  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Residence: Saratoga, CA 95070  
 Citizenship: U.S.A.  
 Post Office Address: 20580 Sevilla Lane, Saratoga, CA 95070

## SECOND JOINT INVENTOR:

Full Name: Jose L. Casillas  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Residence: Cupertino, CA 95014  
 Citizenship: U.S.A.  
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## THIRD JOINT INVENTOR:

Full Name: Sig Wolf  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Residence: Sunnyvale, CA 94087  
 Citizenship: U.S.A.  
 Post Office Address: 806 Nisqually Drive, Sunnyvale, CA 94087

## FOURTH JOINT INVENTOR:

Full Name: Mark Joseph Colby  
 Signature: Mark Joseph Colby Date: 11/15/2002  
 Residence: Wilmington, NC 28405  
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# FEE TRANSMITTAL

Electronic Version 1.1.0

Stylesheet Version: 1.0

*Patent fees are subject to annual revisions on or about October 1st of each year.*

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**TOTAL FEES AUTHORIZED: \$ 990**

**The commissioner is hereby authorized to charge indicated processing and/or publication fees and credit any overpayments to:**

Deposit Account Number: 01-2384



Deposit Account Name: ARMSTRONG TEASDALE LLP

Charge Any Additional Fee Required Under 37 C.F.R. Sections 1.16 and 1.17.

SUBMITTED BY

Authorized Name: Michael Tersillo

Electronic Signature Mark: Michael Tersillo

Date Signed: 20021118

BASIC FILING FEE

Fee Description	Fee Code	Fee Paid
Utility Filing Fee	1001	\$ 740

Subtotal For Basic Filing Fee: \$ 740

EXTRA CLAIM FEES

	Fee Code	Fee	Extra Claims	Fee Paid
Total Claims: 27	1202	\$ 18	7	\$ 126
Independent Claims: 4	1201	\$ 84	1	\$ 84

Subtotal For Extra Claims Fees: \$ 210

**ADDITIONAL FEES**

Fee Description	Number	Quantity	Fee Code	Amount	Fee Paid
Recording Each Patent Assignment Per Property Fee	00000000	1	8021	\$ 40	\$ 40

**Subtotal For Additional Fees: \$ 40**